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EXAMINER
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TO, JENNIFER N

ART UNIT	PAPER NUMBER
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2195

DATE MAILED: 09/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/044,707

Applicant(s)

GULICK, DALE E.

Examiner

Jennifer N. To

Art Unit

2195

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-11 and 13-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11, 13-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

1. Claims 1-11, and 13-28 are pending for examination.
2. The disclosure is objected to because of the following informalities: page 9, lines 1-7 disclosed figs. 2A and 2B, but there is no drawing supported (i.e. should be changed to fig. 2). Appropriate correction is required.
3. Claims 5, and 19 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. The independent claims 1, and 15, recited the limitation of "calling the exit routine based on determining that the task has not completed processing within a pre-selected period of time" is functional equivalent or the same as the limitation that recited in the dependent claims 5, and 19. Hence, the dependent claims 5, and 19 are improper dependent forms as to fail to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

***Claim Rejections - 35 USC § 101***

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.
5. Claim 8-11, and 13-14 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

6. Claims 8-11, and 13-14 are rejected under 35 U.S.C. 101 because the claimed invention are directed to apparatus claims, but appearing to be comprised of software alone without claiming associated computer hardware required for execution, is not supported by either a specific and substantial asserted utility (i.e., transformation of data) or a well established utility (i.e., a practical application).

***Claim Rejections - 35 USC § 112***

7. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

8. Claims 8-11,13-14, and 22-28 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter in which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

9. As per claim 8, lines 5-9, the claimed language recited "the task picker being configured to: determine if at least one task other than the task picker is stored in the queue; execute the at least one task other than the task picker based on determining that the at least one task other than the task picker is stored in the queue; and execute the task picker in response to executing the at least one task other than the task picker

and continue executing the task picker until a pre-selected event occurs". However, the specification only disclosed that the task picker is function to select task for execution based on the priority scheme (specification, page 27, lines 2-3), but it is not supported the task picker to do all the above function. It is noted that specification, page 8, lines 11-15 disclosed the controller configured to determine if at least one task other than the task picker is stored in the queue; execute the at least one task other than the task picker based on determining that the at least one task other than the task picker is stored in the queue; and execute the task picker in response to executing the at least one task other than the task picker and continue executing the task picker until a pre-selected event occurs. Therefore, the claim contains subject matter in which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

10. As per claim 22, lines 3-5, the claimed language recited "the task picker being configured to: execute the task", but it is not supported by the specification that the task picker configured to execute the task. Therefore, the claim contains subject matter in which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

11. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter in which the applicant regards as his invention.

12. Claims 1-11, and 13-28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- a. The claim language in the following claims is not clearly understood:
  - i. as per claim 1, line 3, it is uncertain what is meant by "determining at least one task to process based on a priority scheme" (i.e. priority scheme based on when the task was first stored, FIFO, or based on the importance/severe/critical the task was). Lines 4-5, it is uncertain what is meant by "calling the exit routine based on determining that the task has not completed processing within a pre-selected period of time" (i.e. who has the information that the task has not completed processing within a pre-selected period of time).
  - ii. as per claim 3, line 2, it is uncertain when and how the step of "generating an interrupt" is performed (i.e. when the task is not completed within a pre-selected time period, or at every fixed interval time).
  - iii. as per claim 6, lines 2-3, it is not clearly understood what is meant by "returning control to a task picker in the queue" (i.e. a task picker is a pre-stored task that already in the queue before the one or more task being stored in the queue, or the task picker is one of 'the one or more task being stored in the queue' as recited in claim 1, line 2).

iv. as per claim 8, lines 2, 6-7, it is uncertain what is meant by “the task picker being configured to execute the task picker in response to executing the at least one task other than the task picker” (i.e. the task picker execute itself, or the task picker execute concurrently with at least one task other than the task picker, or execute the task picker when the at least one task other than the task picker is completed/finished). Line 7, it is not clearly understood what is meant by “a pre-selected event occurs” (i.e. predetermined time is up, another higher priority task present in a queue).

v. as per claim 13, lines 2-3, it is uncertain what is meant by “based on a priority scheme” (i.e. priority scheme based on when the task was first stored, FIFO, or based on the importance/severe/critical the task was).

vi. as per claims 15, 17, and 20, they have the same deficiencies as claims 1, 3, and 6 above. Appropriate corrections are required.

vii. as per claim 22, line 4, it is uncertain whether “a task” referred in this line is the same with “the one or more tasks” recited in lines 2-3 (i.e. if it is the same, then it should be referred as one of the one or more tasks). Line 4, it is uncertain what is meant by “based on a priority scheme” (i.e. priority scheme based on when the task was first stored, FIFO, or based on the importance/severe/critical the task was). Line 10, it is not clearly understood how is the step of “determine if the task completes execution

within the pre-selected time interval" performed (i.e. based on what, there is no connection between the controller, the queue or failure recovery timer).

***Claim Rejections - 35 USC § 103***

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claims 1, 4-11, 13-15, and 18-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sand et al. (hereafter Sand) (U.S. Patent No. 6148322).

15. As per claim 1, Sand teaches the invention substantially as claim including a computer implemented method, comprising:

a list stored one or more tasks (fig. 2; col. 3, lines 45-48), wherein each task has an associated exit routine (abstract; lines 7-9, the terminating condition is the exit routine);

determining at least one task to process based on a priority scheme (abstract; col. 2, lines 8-16; col. 3, lines 56-65);

processing the at least one task (abstract; col. 2, line 16; col. 3, lines 56-65); and



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calling the exit routine based on determining that the task has not completed processing within a pre-selected period of time (abstract; col. 2, lines 16-27; col. 4, lines 41-47).

16. Sand did not specifically teach the step of storing one or more tasks in a queue.

17. However, Sand disclosed a list that stored one or more tasks. It would have been obvious to one of an ordinary skill in the art at the time the invention was made to have recognized that Sand's list is the same as the invention queue, and also there is should be a step of storing one or more tasks in the list since Sand's list stored one or more tasks. Therefore, one would be motivated to utilize Sand' system for coordinating the execution of multiple tasks (Sand, abstract).

18. As per claim 4, Sand teaches that wherein determining at least one task to process based on the priority scheme comprises determining the at least one task based on a first-in, first-out priority scheme (abstract; col. 2, lines 8-16; col. 3, lines 45-48, 56-65). In addition, it would have been obvious to one of an ordinary skill in the art at the time the invention was made to have recognized that tasks stored in the queue will be process by first-in first-out.

19. As per claim 5, it is rejected for the same reason as claim 1.

20. As per claim 6, Sand teaches that wherein calling the exit routine comprises terminating the task currently processing and returning control to a task picker in the queue (col. 3, line 55. through col. 4, line 7).

21. As per claim 7, Sand teaches that wherein processing the at least one task comprises executing the task and programming a timer to generate an interrupt after a pre-selected time, wherein the pre-selected time corresponds to the amount of time required for the task to complete executing (col. 3, lines 30-40; col. 4, lines 8-54).

22. As per claim 8, Sand teaches the invention substantially as claim including a computing apparatus, comprising:

a queue having a task picker stored therein (fig. 2; col. 3, lines 45-48, a list stored one or more tasks, the task picker here referred as cyclically repeated task), the task picker being configured to:

determining if at least one task other than the task picker is stored in the queue (col. 3, lines 56-67; col. 4, lines 1-7); and

execute the task picker in response to executing the at least one task other than the task picker and continue executing the task picker until a pre-selected event occur (col. 4, lines 4-7).

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23. Sand did not specifically teach the step of execute the at least one task other than the task picker based on determining that the at least one task other than the task picker is stored in the queue.

24. However, Sand disclosed that the task picker will executing as long as no task is awaiting (col. 4, lines 4-7).

25. It would have been obvious to one of an ordinary skill in the art at the time the invention was made to have recognized that since the task picker will not be executed until all the tasks are executed, hence the task picker needed to determine that no other task is awaiting to be executed, and executed all the tasks that are awaiting to be executed. Therefore, one would be motivated to utilize Sand' system for coordinating the execution of multiple tasks (Sand, abstract).

26. As per claim 9, Sand teaches that wherein the pre-selected event comprises detection of an interrupt (col. 5, lines 6-15).

27. As per claim 10, Sand teaches that wherein the pre-selected event comprises detection of another task being present in the queue (col. 4, lines 25-29).

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28. As per claim 11, Sand teaches that wherein each task stored in the queue comprises an exit routine to terminate that task (abstract; lines 7-9, the terminating condition is the exit routine).

29. As per claim 13, it is rejected for the same reason as claim 8. In addition, Sand teaches that wherein the task picker selects a task to execute from the one or more tasks based on a priority scheme (abstract; col. 2, lines 8-16; col. 3, line 56 through col. 4, lines 1-30).

30. As per claim 14, Sand teaches that wherein the priority scheme is a first-in, first-out scheme (abstract; col. 2, lines 8-16; col. 3, lines 45-48, 56-65). In addition, it would have been obvious to one of an ordinary skill in the art at the time the invention was made to have recognized that tasks stored in the queue will be process by first-in first-out.

31. As per claims 15, and 18-21, they are rejected for the same reason as claims 1, and 4-7 above.

32. Claims 2-3, and 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sand et al. (hereafter Sand) (U.S. Patent No. 6148322), as applied in claims 1, 15 above, and in view of Fletcher et a. (hereafter Fletcher) (U.S. Patent No. 5012409).

33. As per claim 2, sand teaches the invention substantially as claimed in claim 1. Sand did not specifically teach that storing at least one task in the queue at every pre-selected time interval.

34. However, Fletcher teaches that storing at least one task in the queue at every pre-selected time interval (col. 4, lines 29-33, 46-49; col. 5, lines 27-34).

35. It would have been obvious to one of an ordinary skill in the art at the time the invention was made to have combined the teaching of Sand and Fletcher, because Fletcher teaching of storing at least one task in the queue at every pre-selected time interval would improve the integrity of Sand's system by controlling execution of all tasks based on priority and resource availability at each pre-selected time interval.

36. As per claim 3, Sand teaches the invention substantially as claimed in claim 1. Sand did not specifically teach generating an interrupt and storing one or more tasks in the queue in response to detecting the interrupt.

37. However, Fletcher teaches generating an interrupt and storing one or more tasks in the queue in response to detecting the interrupt (col. 4, lines 29-33, 46-49; col. 5, lines 27-34).

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38. It would have been obvious to one of an ordinary skill in the art at the time the invention was made to have combined the teaching of Sand and Fletcher, because Fletcher teaching of generating an interrupt and storing one or more tasks in the queue in response to detecting the interrupt would improve the integrity of Sand's system by controlling execution of all tasks based on priority and resource availability at each pre-selected time interval.

39. As per claims 16-17, they are rejected for the same reason as claims 2-3 above.

#### ***Allowable Subject Matter***

40. Claims 22-28 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 1<sup>st</sup>, and 2<sup>nd</sup> paragraph, set forth in this Office action.

#### ***Response to Arguments***

41. Applicant's arguments with respect to claims 1-11, and 13-28 have been considered but are moot in view of the new ground(s) of rejection.

42. In addition, applicant's remarks filed 08/18/2006 responding to the rejection of claims 8-11, 13-14 under 35 U.S.C. 112, 1<sup>st</sup> paragraph are considered but not persuasive. In the remark, applicant pointed out that applicant's specification page 28, lines 12-21, supported that the task picker performed all the operation as recited in claim 8. However, examiner did not find anywhere in the cited paragraph that

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supported applicant' response (i.e. specifically there is nowhere in the cited paragraph or the specification that supported the recited claim "the task picker is configured to execute the at least one task...and execute the task picker...". Therefore, examiner maintained the rejection regarding claims 8-11, and 13-14 under 35 U.S.C, 112 1<sup>st</sup> paragraph.

### ***Conclusion***

43. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Gulick (U.S. Patent No. 6704763), Yuen (U.S. Patent No. 5437039), Dailey (U.S. Patent No. 7020877), Shavit et al. (U.S. Patent No. 6934741), and Ford et al. teach processing tasks by utilizing timer.

44. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer N. To whose telephone number is (571) 272-7212. The examiner can normally be reached on M-T 6AM- 3:30 PM, F 6AM- 2:30 PM.

45. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (571) 272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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46. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jennifer N. To  
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